

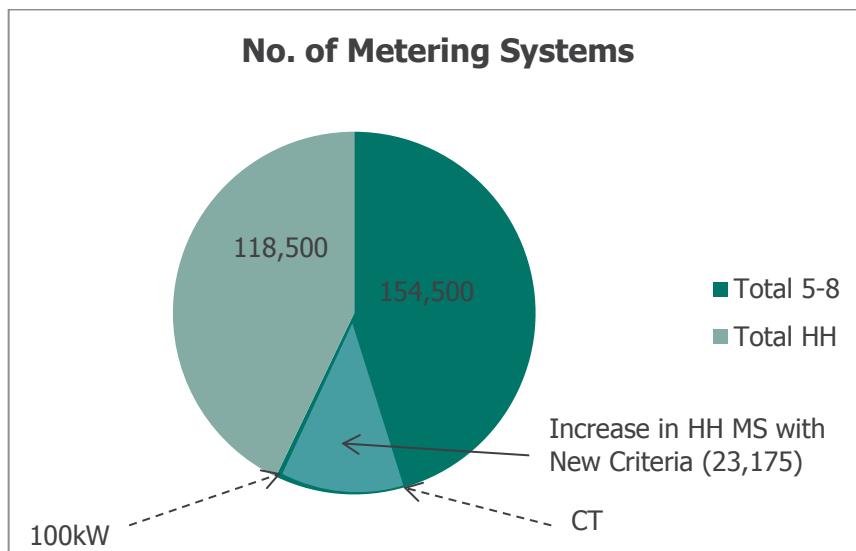


The BSC 100kW threshold

Meeting Name	PSRG
Meeting Date	03 September 2013
Purpose of paper	For Decision
Summary	This paper considers a change to the current criteria for HH Metering Equipment and assesses a new 'CT Operated Metering Equipment' criteria. We conclude that a change is beneficial and potentially cost effective, however given that the outcome of P272 is yet to be determined we recommend revisiting this issue in early 2014. The PSRG is invited to approve revisiting the 100kW threshold following Ofgem's decision on P272.

1. Background

- 1.1 In March 2013 we presented a paper to the PSRG ([PSRG/24/03](#)) which discussed the current 100kW threshold for Half Hourly (HH) metering. We presented options for the PRSG's consideration in this paper and the PSRG asked ELEXON to carry out further analysis. In particular with respect to P272 and the roll out of Smart Meters.
- 1.2 Paper PSRG/24/03 also considered the potential for a new threshold based on a physical attribute of a Metering Systems such as Current Transformer (CT) operated metering. In this paper we concluded that almost all HH Metering Equipment is CT operated (current figures stand at approx. 118,500 HH Metering Systems).
- 1.3 The number of CT operated Metering Systems in Profile Class (P.C.) 5-8 is not known with any certainty across the industry but recent figures provided by a LDSO indicate that 15% of P.C. 5-8 Metering Systems are HH. Therefore, as the number of Metering Systems in P.C. 5-8 is approximately 154.5k it can be assumed that, if the current 100kW threshold were changed then, there would likely be an increase of 23,175 an increase of some 15% HH Metering Systems in Settlement.
- 1.4 The PSRG is invited to comment on the use of 15% being a reasonable estimation of CT operated Metering Systems in P.Cs 5-8.
- 1.5 BSC Modification P272, if implemented, would mandate the use of HH metering for all P.C. 5-8 Metering Systems effectively exceeding the above criteria and bringing the total number of HH Metering Systems to around 273k Meters, an increase of approximately 130%.
- 1.6 The following diagram shows the number of Number of Metering Systems Registered in HH and in P.C. 5-8 as now and with an additional 15% as a result of a new HH criteria of 'CT operated'. All 270,500 would be subject to HH Metering Equipment should P272 be approved.



2. Cost to Serve if CT based HH criteria

- 2.1 Based on the analysis undertaken for P124 in August 2003 it was identified that there would be costs incurred for the CoMC process (from NHH to HH) of approximately £25 administrative costs plus £500 per annum metering costs. Respondents to consultations noted that there would be significant difficulties with the CoMC process and managing customers with this process. However, based on these estimates there would be additional costs to industry of around **£3.1m** as follows:

Estimated costs for a HH Metering System traded in the HH Market = £525

Estimated costs for a AMR/Advanced Metering Systems traded NHH = £391¹

Total estimated additional costs (£525 - £391 * 23,175) = £3.1m

This amounts to a total one off cost for the CoMC process at approximately £580k and year on year HH costs of £2.52m

- 2.2 A more recent cost benefit analysis was also conducted for P272 in summer 2012. This identified the additional costs to serve in the HH market whilst taking into account existing AMR/Advanced metering costs. Costs identified were £112 per Metering System and multiplying this figure by the additional number of Meters gives an approximate cost of **£2.6m**.
- 2.3 The PRSG is invited to consider whether a more up to date and targeted analysis is required.

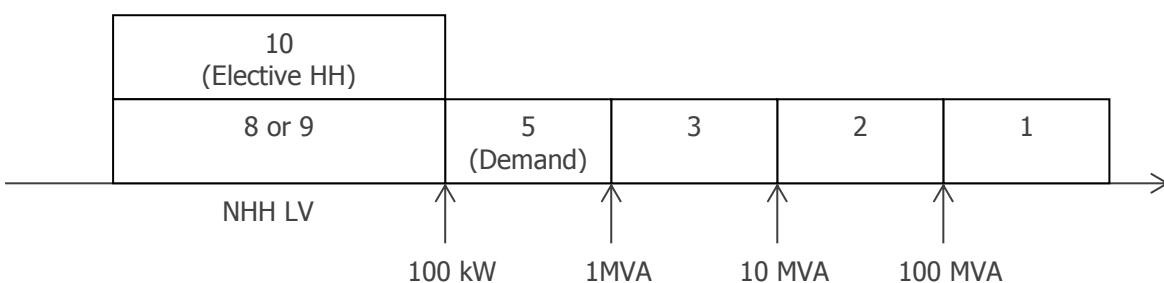
3. Current CoPs

- 3.1 There are currently 10 live metering Codes of Practice (CoPs) under the BSC (numbered 1 to 10). With the exception of CoP 4, the lower the CoP number, the greater the accuracy and redundancy of Metering Equipment is required. CoP4 applies to Commissioning, Testing and Calibration of Metering Equipment and is therefore not within scope of this analysis.

¹ This figure is the average per meter costs for advanced Meters provided for the Profile Administration Service (PrA).

- 3.2 The relevant CoP for a Metering System is determined by the capacity of the circuit to be measured however CoP5 is an exception as it is a demand based CoP. It should be noted that CoPs 6 and 7 were developed to encourage the use of HH data in the NHH market and as such are one option for elective HH metering. In practice however, primarily due to metering costs, these CoPs are not used. The CoPs relating to HH are CoPs 5, 3, 2 and 1 whilst CoP 8 and 9 are NHH and CoP 10 is NHH also but can be used for the elective HH market.
- 3.3 Similarly CoPs 10 and 5 can be used by Suppliers to meet their licence obligations in respect to the provision of advanced metering (for P.C.s 5-8).

Relevant Code of Practice



- 3.4 The application of CoPs 1, 2 and 3 appears to be without issue. However with the potential implementation of P272 CoP 10 may become irrelevant and similarly the requirements of CoP 8 and 9 are likely to be met by the Smart Metering Equipment Technical Specification 2 (SMETS2). We also understand that there are no Metering Systems registered to CoP 6 and 7 and are therefore redundant specifications.

4. BSC Issues under consideration

- 4.1 There are a number of Issues being considered under the BSC presently that may have a direct impact on the future of CoPs 8, 9 and 10.
- 4.2 BSC Issue 46 '[Non Half Hourly Interoperability](#)'. Raised by ELEXON in April 2013 to consider the on-going problems with Meter and Metering Equipment exchanges on a Change of Supplier or Agent. The issue group has discussed most of the problems relating to in-operable equipment and considers that although most issues are commercial matters and outside of the BSC there are potentially steps that can be taken to help. The group is currently considering the benefits of improving the Data Transfer Network (DTN) flow D0313 'Auxiliary Meter Technical Detail'. However the group also believes that most of the problems which ultimately result in the replacement of Meters and equipment will be resolved if P272 is approved and all Meters in P.C. 5-8 are settled half hourly.
- 4.3 BSC Issue 48 '[SMETS & Codes of Practice \(CoPs\)](#)'. This Issue was raised by ELEXON in June 2013 to consider the interaction between the SMETS2 Meter specification and the potential duplication (or conflict) between CoP 10, 9 and 8 and SMETS2. A gap analysis was carried out which suggests that, while there are some minor differences between CoP 10 and SMETS2, on the whole a SMETS2 compliant Meter would meet the Settlement requirements. In addition the working group considers that the application of the SMETS2 will be in parallel with the Settlement CoP rather than replacing them. The working group also believes that if P272 is approved the CoP 10 may become redundant. The final report to the Panel is expected for the September 2013 meeting.

- 4.4 BSC Issue 49 '[Change of Measurement Class \(CoMC\) process for Advanced Meters](#)'. Raised by ELEXON in June 2013 following concerns raised by the PSRG for the CoMC process being a potential barrier for access to the elective HH market. The working group has, so far, met once and has identified a number of issues and some of these are also particularly dependent of the outcome of P272. The Issue 49 working group has its second meeting in September 2013.

5. Conclusions

- 5.1 This analysis has shown that an approximate increase in HH Metering Systems of around 15% of all Metes in P.C. 5 to 8 should cost the industry an additional £3.1m in administrative and year on year costs to serve if a new criteria for mandating HH Metering Equipment is based on the whole current CT threshold is adopted. However, P272 with its wider coverage of all Metering Systems in PCs 5-8, removes the need of a specific change to the demand based threshold (i.e. a sub-set of PC 5-8 Metering Systems). In other words, if P272 is implemented then all Metering Systems in Profile Classes 5 to 8 would be half hourly Metering Equipment effectively making the current 100kW threshold and any potential new CT operated threshold redundant.
- 5.2 Further, the potential solutions arising from BSC Issues 46, 48 and 49 may additionally have a significant bearing on a decision to make change to the requirements for HH Metering Equipment. Some of these solutions are equally dependant on the outcome of P272.
- 5.3 An Authority decision on P272 is expected towards the end of 2013 at which time the future environment for half hourly metering requirements will be established. Given this and that the BSC Issues above are yet to reach conclusions it may be prudent to re-visit the potential for change to the 100kW threshold early in 2014.
- 5.4 The PSRG is invited to:
- CONSIDER** the assessments undertaken in this paper;
 - PROVIDE** views on the figure of 15% of all P.C. 5-8 Metering systems being CT operated;
 - PROVIDE** views on the P124 and P272 cost assessments for a new CT operated HH criteria; and
 - AGREE** that new CT operated HH criteria be reconsidered following Ofgem decision on P272.

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